

A LECTURE

DELIVERED AT THE IMPERIAL INSTITUTE,

On the 17th February, 1896,

BY

COLONEL J. HARRIS, F.R.G.S., F.R.I.Inst.,

ON

The New British Route to
the Pacific.

CHAIR TAKEN BY

SIR J. R. SOMERS VINE, C.M.G., F.R.G.S., F.S.S.

PRINTED BY

POTTISWOODE & CO., 54 GRACECHURCH STREET, E.C.
1896.

dup T

LECTURE

DELIVERED AT THE IMPERIAL INSTITUTE,

On the 17th February, 1896,

BY

COLONEL J. HARRIS, F.R.G.S., F.R.I.Inst.,

ON

THE NEW BRITISH ROUTE TO THE PACIFIC.

CHAIR TAKEN BY

SIR J. R. SOMERS VINE, C.M.G., F.R.G.S., F.S.S.

PRINTED BY

SPOTTISWOODE & CO., 54 GRACECHURCH STREET, E.C.
1896.

LECTURE

Delivered at the Imperial Institute, on February 17, 1896,

BY

COL. J. HARRIS, F.R.G.S., F.R.I.Inst.,

ON

THE NEW BRITISH ROUTE TO THE PACIFIC.

Chair taken by SIR J. R. SOMERS VINE, C.M.G., F.R.G.S., F.S.S.

IN lecturing upon the "New British Route to the Pacific," I have to claim your indulgence, it being of such great importance, both in its social, commercial, and Imperial aspects. The time allotted to me will only allow me to do but scant justice to the subject of this lecture, and it is necessary, without going into the ancient history of Canada, that I should bring to your notice some facts and figures showing the marvellous progress since the commencement of the present century in population, railways, commerce, agriculture, fishery, and mineral resources, all of which have a bearing upon the subject of the lecture, and have been the subjects of parliamentary investigation, with numerous publications from learned and famed travellers whose footsteps your humble servant is now following.

The area of Canada is 3,519,000 square miles.

I will commence from the present century (1800), at which time there were but 161,311 settlers, and in 1812, 300,000, at which time the United States was at war with the Mother Country,

the remembrance of which should now be buried in oblivion by both nations. At the present time the population is about 6,000,000. After 1812, settlers began to pour into the country, turning their attention to agricultural pursuits, and in 1841 the British Government gave them a new Constitution, giving perfect liberty, freedom of religion, and all the advantages of the highest civilisation, with the hallowed principle of responsible government, which gave a great impulse to its present grandeur, solidity and prosperity.

The province of Manitoba and the Great North-West Territory, on which my remarks will be principally directed, were acquired in 1870 by purchase from the Hudson Bay Company, who had obtained almost boundless territory under an ancient charter, and until that date this close corporation were extremely tenacious in allowing any person except their own people from entering their domain. It was a *terra incognita* to the world, being only occupied by fur hunters. So recently as 1880 the islands and territories of the Northern British America were transferred to the Dominion of Canada, and the confederation, as it exists to-day, of all the British North-American group, excepting Newfoundland, imparted safety, grandeur, stability, and protection, over the entire Dominion.

The capital of Manitoba (Winnipeg) will now be shown on the screen. It was formerly called Fort Garry, where furs were bought by the Hudson Bay Company from the Indian trappers, and in 1870 contained about one hundred inhabitants—a small isolated settlement—and now it contains 30,000 inhabitants, and it has risen within a few years to the proud position of one of the leading trade centres of the Continent. It has ten railways, branching like spokes in a wheel in all directions, gathering the wealth of an inland empire at her feet. It is situated half-way between Montreal and Vancouver, and is connected with the navigation of immense lakes and grand rivers, and is the centre of the political, social, literary, monetary, and manufacturing world of the Canadian West.

To-day no other city in America is attracting so much attention to capitalists and has so bright and dazzling a future ; and a line

of railway is now being made which will connect it with the new British route to the Pacific at Seafalls, as will be shown later on on the screen, and thence by a road to Churchill Harbour, on Hudson's Bay. This communication will bring this important city two days nearer to England. This city is only one of many other places, such as Regina and Calgary, which have obtained their importance since the death of the Hudson's Bay Company's monopoly in 1870 and the advent of the Canadian Pacific Railway.

I shall now confine this lecture to the Great North-West, which will receive the greatest benefit from the new British route to the Pacific. It is incumbent upon me to give you some particulars of the extent and resources of the north-west territories of the dominion of Canada and the three territories of Assiniboia, Saskatchewan, and Alberta, covering an area of 303,000 square miles, with Regina as their capital. The whole of this vast region, extending from about 25 miles west from Lake Superior to the Rocky Mountains, a distance of 1,350 miles, and from the forty-ninth parallel of latitude North, to the watershed of the Saskatchewan river, an average distance of 350 miles, embraces an area of 462,500 square miles, or 269,000,000 acres, two-thirds of which has been proved to be capable of producing the finest wheat, and the rest admirably adapted for stock raising and dairy farming. It comprises the richest and most extensive undeveloped wheat-producing lands in the world, and access to which, from the United Kingdom, by ordinary steamers, *via* Hudson Bay, can be reached within eight days.

During 1891 there was under cultivation in the Province of Manitoba, and the three territories of Assiniboia, Saskatchewan, and Alberta, 1,300,000 acres, which produced 20 million bushels of wheat and 30 million bushels of barley and oats, whilst the heads of cattle were estimated at about 600,000.

Mr. Ruttan, engineer to the City of Winnipeg, in a recent publication, estimates that:—"Within the next decade, this Province (Manitoba), and the territories, will be producing 200 million bushels of wheat annually, and that every cent. per bushel saved in the cost of transportation would mean two million

dollars annually to the farmers of the North-West ; that 200 million bushels of wheat means six million tons of merchandise ; to get that quantity to a port of export would require 15,000 trains of 20 cars each, or over 40 trains per day all the year round, including Sundays, and would then require 3,000 vessels of 2,000 tons each for further transportation."

The present cost of transporting wheat to the seaports at Montreal, Boston, or New York, from the centre of this region, is about 35 cents. per bushel, whilst the same charge per mile to Port Churchill would not exceed 15 cents., and the saving in the carriage of live stock would be fully equal to £3 per head.

One of the most important questions of the day is the importation of live stock into the United Kingdom. Here is a country capable of raising millions of heads of cattle, absolutely free from every kind of disease, owing to the remarkable healthiness of the climate ; but the present export is prohibited, owing to their having to pass for more than 1,000 miles through the Eastern portion of Canada to a port of shipment. The opening of the Hudson's Bay route would remedy all this, and would enable the cattle to be shipped in prime condition at half the present cost by way of Montreal.

The Marquis of Dufferin and Ava, the Marquis of Lorne, Professor Fream, Sir William Van Horne, Mr. Rudyard Kipling, Mr. G. B. Power, and many other eminent men, have borne testimony from personal knowledge of the marvellous richness of the soil, and the healthiness of the climate of this great region. In an article contributed to the "Times," on the 23rd of November last, Mr. Rudyard Kipling says : "People have no more than just begun to discover a place called Banff Hot Springs, two days west of Winnipeg. In a little time they will know half a dozen spots not a day's ride from Montreal, and it is along that line that money will be made. In those days, too, wheat will be grown for the English market four hundred miles north of the present fields on the west side, and British Columbia, perhaps the loveliest land in the world, except New Zealand, will have her own line of 6,000-ton steamers to Australia, and the British investor will no longer throw away his money on hellicat South American republics, or

give it as a hostage to the States. He will keep it in the family, as a wise man should. Then the towns that are to-day only names in the wilderness, yes, and some of those places marked on the map as Hudson's Bay Posts, will be cities, because—but it is hopeless to make people understand that actually and indeed we do possess an empire of which Canada is only a portion, an empire that has not yet been scratched."

To the North-West of the territories already described there is a vast region embracing the Athabasca and Great Mackenzie Basins, on the resources of which a Select Committee of the Senate of the Dominion took evidence, and reported in 1867, in which amongst other things the Committee say :—"That within the scope of the Committee's inquiry there is a possible area of 650,000 square miles, suitable for barley, and 316,000 suitable for wheat ; that throughout this arable and pastoral area latitude bears no direct relation to summer isotherms, the spring flowers and buds of deciduous trees appearing as early north of the Great Slave Lake (Lat. 63) as at Winnipeg, St. Paul, Minneapolis, Kingston or Ottawa, and earlier along the Peace, Liard, and some minor affluents of the Great Mackenzie River, where the climate resembles that of Western Ontario. That on the head routes of the Peace, Liard and Peel Rivers, there are from 150,000 to 200,000 square miles, which may be considered auriferous. That the evidence submitted to the Committee points to the existence, on the Athabasca and Mackenzie Valleys, of the most extensive petroleum field in America, if not the world. The uses of petroleum, and, consequently, the demand for it by all nations, are increasing at such a rapid rate that it is probable that this great petroleum field will assume an enormous value in the near future, and will reckon among the chief assets comprised in the Crown domain of the Dominion, and be shipped from Churchill, or some other northern port of Hudson's Bay, to England."

CLIMATE.

The summer months have bright, clear, and often very warm weather, but the nights are cool ; the atmosphere is serene and free from moisture ; the winter is cold but the atmosphere is

buoyant, and the sun shines almost every day; the air is very bracing, and the dryness of the air prevents the penetrating chill which makes the cold on the coast so severe, is not felt.

FISHERIES.

The Fisheries are the largest in the world. Fully 8,000 miles of sea coast in addition to the Great Lakes of 36,000 square miles, and a number of grand rivers containing salmon and other fish. Salmon alone in 1891 was valued at 2,242,000 dollars, and from the Fraser River alone over 20,000,000 lbs. were canned, and the great rivers in the Great North-West running into Hudson's Bay, are swarming with salmon and trout, which are undisturbed for want of means of conveyance.

MINES.

The Mineral Wealth of Canada is so great that an American author has said:—"To particularize the undeveloped wealth of the Northern land would require volumes, and statistics have been given that from the Mines of British Columbia alone in 1894, 456,066 ounces of gold to the value of £1,824,264 were raised. These deposits cover an immense area, and in the Mackenzie Basin it is said there are 150,000 square miles of auriferous lands and several rivers are now being successfully worked for gold in the North-West territory," and west of the Rocky Mountains a metalliferous area, principally of gold-yielding rocks, thirteen hundred miles in length, with an average breadth of four to five hundred miles, with coal and other minerals in abundance.

RAILWAYS.

There are 15,000 miles in operation, and others are being constructed.

EDUCATION.

Education is free from the Village School to the Universities. In 1894 there were 16,659 public schools, having 904,515 pupils.

RELIGION.

There is no State Church, and the utmost religious liberty prevails. In 1891 there were 10,480 churches of different denominations.

I will now come to the heart of my subject and call your attention to the map on the screen showing the New British Route to the Pacific. I will take you from Liverpool through Hudson's Straits to Churchill Harbour on Hudson's Bay, and from there to Seafalls, and from there to Prince Albert, called the Garden and Park of the Great Northern Territory, from there through the richest wheat growing land in the world to Calgary, joining the Canadian Pacific Railway, bringing us into communication with San Francisco and Vancouver, the distance from Port Churchill to Calgary of about 1,000 miles effecting a saving of 1,328 miles over the present route *via* the Canadian Pacific Railway from Liverpool to San Francisco and Vancouver, or in other words, saving *three days* to India, China, Japan, San Francisco and our Pacific Colonies, also effecting a saving of £3 per head on immigrants, £3 to £4 a head on cattle, £1 per ton on wheat and other cereals, and upon merchandise from 30 to 40 per cent. This simple statement will show the immense value of the short route. Having taken you over the route, I will now give you extracts from the opinions of practical men, reports of Government Commissions relating to the proposed route.

EVIDENCE AS TO THE COMMERCIAL PRACTICABILITY OF THE NAVIGATION OF THE STRAITS AND HUDSON'S BAY.

The evidence on this, the most important of all questions, is complete in every particular so far as can be judged from investigation and practical experience. First we have the marvellous record of the Hudson's Bay Company, who for 223 years have been trading between the United Kingdom and the shores of this great inland sea, with the loss of only two vessels, the *Graham* and the *Kitty*. Upwards of 800 vessels are said to have passed through the Straits, including British troopships, emigrant ships, war vessels of the English and French (some of them carrying 74 guns) as well as ships bound on voyages of discovery, trade, and whaling.

One of the most interesting and early reports of the navigation and resources of Hudson's Bay is that of Dr. Robert Bell, F.G.S., Director of the Geological Survey of Canada, an epitome of which was read before the Royal Geographical Society in 1881. Dr. Bell, who had spent six seasons since 1869 in explorations around the bay itself and its vicinity, amongst other things, says :—
“ The total area of the bay is about 500,000 square miles, enclosed by land on all sides except the North-East, where it communicates by several channels with the outer ocean, the principal or best known of these straits being about 500 miles in length, and an average width of 100 miles. The basin of Hudson's Bay has a width of 2,100 from east to west, and a length of 1,500 miles from north to south, and its dimensions approach the enormous number of 3,000,000 square miles. Over a great part of this vast region there is a temperate climate ; numerous large rivers and lakes are embraced within these limits.”

Both the bay and strait are remarkably free from rocks and shoals ; the depth of water is very uniform, and averages about 70 fathoms. The Nelson River, with its tributaries, may be considered one of the first-class rivers of the world. The shores and

islands of the bay are rich in minerals, especially in iron ore of a high grade, which lies exposed in inexhaustible quantities. The Canadian North-West Territories, embracing hundreds of millions of acres of fine land, are capable of becoming the greatest wheat field in the world. The centre of this immense agricultural region probably lies to the north of the Saskatchewan. If we look at a map we shall see at a glance that the shortest route between these territories and England is through Hudson's Bay. Even the City of Winnipeg, which is near the South-Eastern extremity of these territories, is at least 800 miles nearer to Liverpool by Hudson's Bay than by the St. Lawrence route. Now, let us consider the relative progress of two persons travelling to Liverpool from the centre of this vast region, the one going to Winnipeg and the Valley of St. Lawrence, and the other by Nelson Valley and Churchill Harbour. At about the same time the former requires to reach the City of Winnipeg the latter arrives at Churchill. From Winnipeg our traveller has still to go 1,291 miles by the Lake Superior route, or 1,698 if he prefer the whole rail journey through American territory *via* Chicago, before he reaches Montreal, where he will still be about as far from Liverpool as our traveller when he reached Churchill. In other words, the route from the North-West Territories to England *via* Hudson's Bay saves the whole distance between Winnipeg and Montreal. The great saving in distance represents an important economy in time and money, or in freight and passenger rates. If the grain, cattle and other productions of the North-West Territories could reach a European market only through Ontario and Quebec, or by way of New York, a large proportion of their value would necessarily be consumed by the long land carriage; whereas, if they can find an outlet at Churchill Harbour there will be an average saving of 1,291 miles, as compared with Montreal, and upwards of 1,700 as compared with New York, and this without any increase in the length of the sea voyage. In effect, this will place a great part of the farming lands of the North-West Territories in as good a position with regard to a seaport as are those of Ontario, west of Toronto, and will consequently increase the value of every description of farm

produce, and therefore of the farms themselves. Some kinds which could not possibly be sent out of the country at all by the longer land route may be profitably exported by the shorter one. For the transportation of both grain and fresh meat, as Colonel Dennis has pointed out, the northern route, besides the shortening of distance, would have greater advantages over all those to the south, owing to its cooler and more uniform temperature. Heavy or bulky goods of all kinds would, of course, be imported to the North-West by the shortest land route. In regard to the export and import of live stock, this independent route will possess a great importance to these territories. Hitherto, cattle, horses, hogs and sheep have there enjoyed an immunity from almost all forms of contagious diseases, and, owing to the healthy nature of the climate for these animals, it is hoped this state of things will continue. The domestic animals in the United States and the older Canadian Provinces being occasionally afflicted with contagious diseases, it becomes dangerous for European countries on their importation. In the event of an epidemic of this nature existing in some part of these regions, but not in the North-West Territories, there need be no objection to exporting live stock from the latter by way of Hudson's Bay.

As a route for emigrants from Europe, that by Hudson's Bay possesses not only the advantage of the short land journey, but the still more important one to us of entirely avoiding the United States and the populous parts of Canada, in both of which it is well known a very serious percentage of the immigrants destined for our North-West lands are every year enticed away to settle in the great Republic. An inlet by Hudson's Bay is the only thoroughly independent channel which can ever be established between the British Islands and our great and valuable territories in the interior of North America; and it is very desirable on national grounds that it should be opened up. Troops have hitherto been sent to the Red River Settlement on more than one occasion by way of Hudson's Bay, while the intervening country was, as it is yet, in a state of nature. Were a short railway built through this tract it would at once become for military purposes

an easy connecting link with our Pacific Colonies and the Mother Country.

An impression has long prevailed that Hudson's Bay and Strait could not be navigated for the ordinary purposes of commerce on account of ice, but this idea is probably destined to prove chimerical. The fact that these waters have been successfully navigated by ordinary sailing vessels for 200 years, in order to secure what little trade the country afforded, indicates what may be expected from properly equipped steamships so soon as the larger business of the future may require their services in this direction. The conditions of the seaborne commerce of the North-West in relation to Hudson's Bay will probably turn out to be similar to those of the rest of Canada with reference to the Gulf of St. Lawrence. In both cases everything must be done during the summer. Yet Hudson's Bay is open all the year round. No one would be likely to suppose that a sea of such extent in the latitude of the British Islands would ever be frozen across. The lower St. Lawrence is also partly open, even in the middle of winter, but the difficulty in both cases is the impossibility of getting into harbours. A harbour such as that of Churchill, on Hudson's Bay, would have the advantage over Quebec or Montreal of connecting directly with the open sea, and here in the autumn vessels would not be liable to be frozen in, as occasionally happens in the St. Lawrence. There has been some discussion as to the length of time during which Hudson's Strait and Bay might be navigated each year. There does not appear to be much evidence that the Straits any more than the Bay is closed at any season. Its great width, depth, and strength of the tides probably keep it open all the winter. My own experience, and that of many others, leads me to believe that the climate generally of Hudson's Bay is much better than some writers have represented it to be. From all that I could learn or observe, it appears that the Straits and Bay may be navigated, and the land approached by steamers during an average of four-and-a-half months each year, or from the middle of June to the end of October. Churchill Harbour does not freeze up until November, and the sea is open close to it the whole winter.

In order to obtain full and accurate information on this important question a Select Committee of the Parliament of Canada was appointed in 1884, which took evidence and reported on the Hudson's Bay route to England, wherein they say : " Let us suppose the possibility of establishing a line of steamships between Liverpool and Hudson's Bay ports, which would carry freight at the same rates as the steamships between Montreal and Liverpool. Now the distance between Winnipeg and Montreal is about 1,400 miles, while it is not more than 700 to York Factory (on Hudson's Bay). It costs $1\frac{1}{2}$ cents per ton per mile to forward grain from St. Paul to New York, which, applied to the distance to be traversed between Winnipeg and Montreal, would give a charge of 21 dollars per ton, or of 10 dollars 50 cents from Winnipeg to York Factory—say the half. If now the ton is reckoned as equal to 33 bushels of grain, the difference in freight in favour of the Hudson's Bay route would be a saving of 32 cents per bushel, or, in other words, an additional profit of 6 dollars 40 cents per acre, yielding an average of 20 bushels. Other calculations make the saving one-third the present cost of transport realised by the farmers of the West upon the opening of a channel of exportation by the Hudson's Bay. A large proportion of importation from Europe would take this road ; the immigrants proceeding westward would see that they could shorten the annoyances, the delays, and the cost of a journey across the continent by from 800 to 900 miles. The export of butcher's meat would alone furnish a considerable portion of the lading of Hudson's Bay steamers, and many persons are of opinion that this route would command a considerable portion of the import and export trade of the North Western States of the Union. We speak merely incidentally of the Hudson's Bay fisheries and of the working of the minerals, almost inexhaustible in their richness, which are to be found there. To sum up the whole, Hudson's Bay appears to us to be destined to perform the same services for the vast territories of the North West that the Gulf of St. Lawrence does for the vast but fertile valley bearing the same name."

Admiral Markham, R.N. accompanied an expedition in 1886, and in an address read before the Royal Geographical Society on the 11th of June, 1888, amongst other things, said, "By a fortunate accident I was enabled to avail myself of an invitation I had received to take passage on the *Alert* during this cruise. I considered myself very fortunate in having the opportunity afforded me to do so, for it had long been my wish to visit Hudson's Bay. The offer, therefore, of going in the *Alert*, which would enable me to make the passage of the straits as well as of the bay, was too good to be refused, and I eagerly availed myself of it. I was thus enabled to form my own judgment of the state and condition of the ice in Hudson's straits during at least one season of the year, while my observations, combined with a comprehensive study of all that had been written on the subject, would enable me to form my own views regarding the practicability of the route as a commercial highway. I was also able to form a better estimate relative to the duration of the navigable season.

"I might observe that I was quite ignorant of the controversy that had been carried on for some time between those who were in favour of the Hudson's Straits as a commercial route, and those who were opposed to it. I was, therefore, in a better position to form a perfectly impartial and unbiassed opinion.

"Under these circumstances I joined the *Alert* at Halifax, and sailed in her from that port on the 23rd of June.

"On the 5th of July we reached the entrance of Hudson's Straits, where we were detained for some days, partly by thick weather, and partly by loose streams of ice; but the latter was never packed sufficiently close to prevent even a slow steamer like the *Alert* making fairly good progress. From the 9th to the 11th of July scarcely any ice was seen, and a distance of 200 miles was accomplished in about 36 hours. This fact alone, without further evidence, is in itself sufficient to show how free the eastern part of the straits was from ice; for the *Alert*, if driven at her full speed, could only steam about six knots an hour.

"Steam has now effected a complete revolution in ice navigation, and the most advantageous time for pushing on is when

the ice is loose. Under similar circumstances, a sailing ship would be utterly hopeless. It is, therefore, only reasonable to infer that what has been performed regularly, and year after year, by sailing ships, can be accomplished with greater regularity and certainty by well-built steamers, specially constructed for ice navigation, and provided with powerful machinery.

"The nature and consistency of the ice in Hudson's Straits are such that, with an efficient steamer, the passage could be accomplished with very little delay or difficulty. This being the case, it is not surprising to hear that the people of the North-West are anxious to have a seaport on the shores of Hudson's Bay, and to secure the construction of a railroad to connect such port with Winnipeg, or some equally convenient depôt on the newly-established line of the Canadian Pacific Railway.

"The achievement of such an undertaking would result in shortening the distance that the produce of the country destined for exportation would have to be transported by one-half. As the cost of transport by rail is governed by the distance to be conveyed per mile, it will at once be understood that if the mileage is reduced by one-half, the cost of conveyance will be diminished in the same proportion. It has been estimated that the result of the construction of a railroad from Winnipeg to Hudson's Bay would be a clear gain to the farmers and producers of the North-west of about £3 per head of all cattle exported and 5s. upon every quarter of grain sent for shipment.

"In conclusion, we must again call to mind the fact that the vessels employed on the Hudson's Bay service have hitherto been sailing ships. Steam has now robbed ice navigation of many of its difficulties and dangers, and it is only fair for us to assume that, with the appliances that science has since revealed to us, we can in these days achieve with greater ease and celerity, and with more assured certainty, as much as was accomplished by Hudson and Baffin, by Button and Luke Fox, in their rude and poorly-equipped fly-boats.

"The case, then, can be briefly stated. If sailing ships have annually taken the furs and other merchandise of the Hudson's Bay Company through the Straits for the last two centuries,

a fortiori it may be looked upon as certain that powerful steamers will be able to do the same for the produce brought to the West Coast of Hudson's Bay by a railway from Winnipeg."

The Legislature of the Province of Manitoba appointed a Select Committee in 1884 to procure evidence and report upon the practicability of establishing a system of communication *via* Hudson's Bay. After taking the evidence of a number of men with a thorough practical knowledge of the subject, they say in their report, "Many of the gentlemen examined have had personal and extended experience as officers and servants of the Hudson's Bay Company at their ports on Hudson's and Ungava's Bays and the rivers entering into those bays. *No evidence has been given that goes to prove that Hudson's Straits and Bay proper ever freeze over, or that the ice met with in those waters is sufficient to prevent navigation at any time of the year.* That consequently the period of navigation is defined by the time during which the ports, harbours, or roadsteads on the shores of the Bay can be entered by vessels of a suitable description for such navigation."

Mr. C. R. Tuttle, secretary to the first year's expedition, places the period of navigation at eight months.

Mr. William J. Rynner, an officer who accompanied the three expeditions—from June to December.

Mr. D. J. Beaton, who made the round voyage with the expeditions of 1885, reported the Straits navigable from May to December.

Mr. William A. Archibald, for many years in the service of the Hudson's Bay Co., at Moore Factory—from June to December.

Captain William Hackland, in the Hudson's Bay Co.'s service for 39 years—Straits never freeze; no reason why steamships should not navigate at any time.

There are other opinions, giving five months in the year for navigating the Straits. At all events there cannot be any doubt but that the Strait is open for the same time as the Gulf of St. Lawrence.

Churchill Harbour.—Sir Henry Lefroy, President of the Geographical Section of the British Association, in his Address at

Swansea in 1880, speaking of Churchill Harbour, said : "It will undoubtedly be the future shipping port for the agricultural products of the vast North-West Territory, and the route by which emigrants will enter the country."

Dr. Bell, F.G.S., Director of the Geological Survey of Canada, in his address to the Royal Geographical Society in October, 1881, said : "The Churchill River is remarkable for having at its mouth a splendid harbour, with deep water and every natural convenience for the purposes of modern commerce. It can be entered with ease and safety by the largest ships at all stages of the tide. On the point at the west side of the harbour stands the old fort 'Prince of Wales,' which is probably the largest ruin in North America."

Mr. George A. Bayne, Civil Engineer, in his evidence before the Select Committee of the Legislative Assembly of the Province of Manitoba, having been engaged on the survey of this proposed railway and harbour, said : "The harbour at Churchill is one of the finest I have ever seen. Nature has done so much for it in the way of protection from storm and the depth of water that without further improvements it is fitted to take rank among first-class ocean ports. I took careful soundings, and found that at a distance of 400 feet from high-water mark along the shore a depth of 38 feet, deepening suddenly to 50 feet. These soundings were taken at extremely low tides. The bay and harbour are open for navigation from the 15th of June to the 20th of October for ordinary sailing vessels. Sometimes the ice does not take fast in the harbour till the 1st of December. The ice is never solid in the bay for a greater distance from the shore than half a mile. This can be removed by means of an ice breaker, as now practised by the Russian Government in ports and rivers within the Arctic Circle, and this is liable to be broken up by wind and tide, so that there will be found little difficulty that experience and practice will not overcome to prevent the loading and unloading of steamers all the winter."

Mr. William Smith, the Deputy of Marine and Fisheries of Canada, states : "Churchill is a splendid harbour, which can be entered with ease and safety by the largest ships at all stages of

the tide, and is destined some day to be the main commercial point of this inland sea, and what is of the greatest importance, an inlet by Hudson's Bay is the only thoroughly independent channel which can ever be established between Great Britain and her North American possessions."

The Direction of the Railway.—It is proposed to divide the lines into three sections. The first from Port Churchill to Seafalls, 350 miles, where it would be joined by the line at present under construction from Winnipeg, thus giving a connection on the south with the City of Winnipeg, and with the North Western States of the Union. This Section will be first constructed. It has been surveyed by a competent engineer, Mr. Bayne, the levels taken, and presents no difficulty to the construction of a good line of railway at a moderate price. Timber and stone are in abundance for all requirements, the climate is said to be more favourable, and the rain less, than at Winnipeg, and that work can be carried on during the whole of the winter.

The completion of this section will place Fort Churchill in direct railway communication with the navigation of Lake Winnipeg and the Red River, passing the City of Winnipeg, and extending far into Minnesota and Dacotah and the Great Saskatchewan River, forming together a south and westward navigation for steamers for a distance of about 1,800 miles.

Section 2 from Seafalls to Prince Albert, about 300 miles, runs through some of the richest wheat land in the North-West, and will form a connection with Prince Albert with the Regina branch of the Canadian Pacific. The country is exceedingly favourable for the cheap construction of the railway.

The third section from Prince Albert, *via* Battleford to Calgary, about 350 miles, runs through a fine prairie country, unequalled in North America for the raising of cattle and dairy produce, and will be a surface line easy and cheap in the course of construction.

At Calgary the railway will form a junction with the Canadian Pacific Railway, and by passing over that line to Vancouver effect enormous saving from ocean to ocean, as compared with the route via Montreal, of 1,328 miles.

It will also connect with the present branch line to Edmonton and form the shortest route between the United Kingdom and the Athabasca River and Great Mackenzie Basin, which comprises the greatest petroleum deposit in America and the rich agricultural and auriferous valleys of the Peace, Liard, and other rivers.

Having proceeded so far in regard to the commercial benefits resulting from the proposed new British route to the Pacific, I would here remark that Churchill will be a great city and the great gate of the North American Continent, which will be an outlet for grain and cattle, and the importance of which city in the future is incalculable as a base of supply and an impregnable military highway between Great Britain and the Colonies in the Pacific, and the principal link in the chain binding our Colonies to our glorious Mother Country.

At present England expends 170 millions sterling for food abroad, and how little of this immense sum is expended in purchasing food from Canada! Situated at our own door it is the brightest and most valued gem in the crown of England. Should we not foster a trade with a part of our Empire which is able and willing to supply our need? Canada can be made into the granary and larder of England, without the danger of depending upon any foreign nation in the time of war. This is a vital and an Imperial question. It has been stated that we have only at present in England three months' supply of food, and, as an object lesson, let us bring back our minds to the German and French war. The inhabitants of Paris were reduced to the purchasing of rats at two francs and cats at three francs each, in the public market. And now contemplate a famine in England, and the horrors and frightful results attending thereon—no work for men, no law or order, children crying for bread and none to give them, and parents driven to madness. All this is possible under present circumstances, and shows the Imperial necessity of the new British route to the Pacific.

We will now examine the present roads to our valued possessions in the Pacific, firstly by sea, occupying months in travelling; secondly by the Suez Canal; thirdly by the Canadian Pacific Railway. The first cannot be depended upon for a sufficient

supply in proper time for the wants of the nation. The second would be stopped to shipping. The third, the Canadian Pacific Railway, is unfortunately running close to the United States boundary for 1,000 miles, which could be easily destroyed by Fenians or members of the Clan-na-Gael, or other evil-disposed persons ; although there cannot be a doubt but that the Government of the United States would use all their power to prevent such a calamity, but such would be of no avail, and without doubt the communication would be destroyed.

Thanks to the Navy League, the public press, the united voice of the people, and our Government's intention to increase our navy, our commerce will be practically safe, but naval victories will not feed the starving at home ; therefore I hope that a Food League will be formed to ensure a certain supply of food. Our present Prime Minister (Lord Salisbury) clearly and ably put forward the food question in a powerful speech at South London, on the 13th of June, 1893. His far-seeing views, his great discernment, and the unbounded confidence placed in him by the people of this great Empire will, I trust, cause him to favourably consider both the commercial and Imperial necessity of the construction of the New British Railway to the Pacific, and may he henceforth be known as the Watchman over the British Empire—and that our wonderfully gifted Colonial Secretary may turn his practical mind to the project having a bearing upon the carrying out his great desire of Imperial Federation, and so draw nearer and strengthen the bonds binding our Colonies to the Mother-Country, and increasing the heartfelt loyalty to our beloved Sovereign ; and, in conclusion, I will repeat the words of an American writer :—

“Population westward, as if driven by the mighty hand of God—from the mountain valleys of Asia where the race was cradled, its ceaseless pilgrimages have moved ever on and on. Mountain walls and continental wilds and treacherous leagues of trackless sea may lie across the appointed path, but still the mighty column in its onward march surmounts, subdues, and crosses all, impelled by forces as resistless as those which speed the Pleiades in their course. But on the western coast of this

great continent the time-long journey shall at last be done ; here in the Great North-West of Canada the race shall reach its final home. Here have been grouped, as nowhere else in all the world, mountain and valley and plain, river and lake and sea. Here has been stored illimitable wealth in mine and forest, sea and soil, and to these broad foundations for a sure prosperity there has been added a climate which embraces exactly those conditions which are BEST ADAPTED to produce the highest possible development of the individual and the race. Here genial summer suns shall woo the fruits from fertile fields, and winter's stinging cold shall tend alike to physical and moral health. Here for a century to come shall they who hunger for a home be satisfied, and all the needs of myriads of men be well supplied."

IMPERIAL INSTITUTE
OF THE UNITED KINGDOM, THE COLONIES AND INDIA,
IMPERIAL INSTITUTE ROAD, LONDON, S.W.
19th February, 1896.

His Royal Highness the President and the Executive Council
of the Imperial Institute have much pleasure in conveying to

Colonel JOSIAH HARRIS, F.R.G.S.,

the expression of their cordial thanks for his kindness in favouring
the Fellows of the Institute and their friends with an Illustrated
Lecture on February 17th, 1896, entitled "The New British
Route to the Pacific."

[Signed] HERSCHELL,
Chairman of the Governing Body.

Colonel J. HARRIS, F.R.G.S.,
Crofton Lodge,
Sydenham, S.E.

80

PRINTED BY
SPOTTISWOODE & CO., 54 GRACECHURCH STREET,
LONDON, E.C.